THE BRICKBVILDER

AN ILLVSTRATED MONTHLY MAGAZINE DEVOTED TO THE ADVANCEMENT OF BRICK ARCHITECTVRE - SVBSCRIPTION PRICE TWO DOLLARS AND FIFTY CENTS A YEAR - SINGLE NVMBER TWENTY FIVE CENTS -

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The Brickbuilder.

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THE BRICKBUILDER.

AN ILLUSTRATED MONTHLY DEVOTED TO THE ADVANCEMENT OF BRICK ARCHITECTURE.

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PUBLISHERS' NOTICE.

The many details connected with starting The Brickbuilder, the necessity of making special drawings, of having articles carefully prepared, took considerably more time than was anticipated when the work was begun last year and the first number set for January. But believing that a good start is half the battle, the publishers have adopted the policy of not saving time at the expense of quality, and while material for future numbers is well in hand, so that the lost time will be made up, this gain will be gradual, and will not be increased at the expense of quality. This explains the tardy issue of this number; but we trust the care taken in selection of material will pardon its appearance a month late. The number for March is well in hand.

Our lateness of publication — caused by unexpected delays at the start, and which we shall gradually make up — enables us to refer to the appreciative notice of this journal which we are glad to receive from the *Clay Worker* in the March number. The *Clay Worker* so justly defines the position of The Brickbuilder, as compared with its own, that we venture to quote the notice entire.

"There is a new missionary in the field, another advocate of better buildings, The Brickbuilder, an illustrated, monthly magazine, devoted to the advancement of brick architecture. We shall be happy, indeed, if any work of ours may contribute to the material success of this able advocate of a worthy cause. This journal, carefully edited, copiously and artistically illustrated, will do a great deal for good building. It always requires some boldness and a certain amount of risk to enter a special field, which presents no records of previous successes to justify an effort. The Brickbuilder deals with brick after they have been marketed. The *Clay Worker* deals with brick in the process of manufacture and marketing. As an advocate, we suggest uses for brick and clay products for the purpose of enlarging the field. The Brickbuilder takes up the work where we leave it, and deals with brick and clay products in an artistic and constructive spirit. With its well-selected examples, its beautiful illustrations and trite (?) suggestions, we can see that the building world will be made better by the existence of this publication. And we shall hope that brickmakers, as well as brick users, will see and appreciate the work that is being done for them in the higher education of the people, and do their share in the support and encouragement of this journal. It is certainly not out of place for us to say here that the work of special journalism in all lines is doing an incalculable amount of good in the rapid advancement of all of the world's interests. We welcome the new missionary, which is published by The Brickbuilder Publishing Company, P. O. box 3282, Boston, Mass."

We thank the *Clay Worker* for its good wishes, which we heartily reciprocate so far as a recruit may without presumption reciprocate the good wishes of a veteran. We think that when the brickmakers, the builders, and the architects discover what The Brickbuilder is and what it is doing (and we intend they shall not lack opportunity), they will very soon conclude that they cannot do without our journal; indeed the indications already begin to look that way.

The same number of the *Clay Worker* contains a reproduction from a photograph of a grain elevator at Hamburg, Germany, built entirely of brick, which, among problems of its kind, is of unusual interest and excellence from an architectural point of view, and shows how much can be done to give charm to the most utilitarian building when its design is treated with thoughtfulness, reserve, and artistic feeling.

As the *Clay Worker* rightly says, in an excellent and very just critique on the design of the building, "There is no problem in building, where building work is done substantially, that does not admit of artistic treatment independent of cost." The whole article is well worth reading. There is also a short article by Mr. J. W. Crary, Jr., on hollow walls, in which he dwells on their desirability and real economy.

In the March number of the *Architectural Review* we notice the excellent design for the headquarters of the Boston Fire Department by Mr. E. M. Wheelwright, the city architect of Boston. The building is simple in design, excellent in proportion, and very effective, with its lofty tower modelled after that of the Palazzo Vecchio at Florence. It is a characteristically brick building, although with some stone trimmings. Much of Mr. Wheelwright's work since he entered upon the duties of city architect of Boston is of unusual interest. We shall certainly be within the mark when we say that the buildings to which we refer must be regarded as among the most interesting examples of brick architecture which this country has produced. We publish in this number a detail of the Agassiz Grammar School, and shall in future numbers publish other examples of the more noteworthy of these brick and brick and terra-cotta buildings which are now in process of erection for the city of Boston. Mr. Wheelwright has evidently studied with great care the brick architecture of Europe, especially the Lombard brickwork of the 14th century, but has made free and original, and for the most part very successful, use of his models. The use of colored mortar as an element of color design is in some of these buildings carried further than we have known it to be elsewhere. For instance in the Agassiz Grammar School, the first story is laid in red mortar, the second in yellow mortar, and the broad frieze at the top in broad joints of white mortar. Effective and interesting as this treatment may be when the building is new, we question how valuable it may prove as a permanent element of color design. Dust and dirt settle in the joints, the weather discolors them, and we doubt whether at the end of thirty years or even less it would be possible to say of what color the joints had originally been.

A more legitimate method of producing color effect is in the use of brick of different colors, and we do not remember to have seen this more charmingly done than in some of Mr. Wheelwright's designs for cornices.

Mr. Wheelwright also makes free use of different bonds as a decorative element. We find in these buildings not only the ordinary Flemish and true English bonds but an original and very decorative use of what Mr. Warren in his article in our last issue referred to as the American bond. The course of headers used every seventh course is recessed half an inch from the wall face, thus emphasizing the horizontal lines which these courses naturally produce. Besides this we find a very curious bond, we believe of French origin, which consists of a course of stretchers alternating with course consisting of three headers, a stretcher, a header, a stretcher — then repeating. It could be used to form a most interesting series of diapers in different colors, a use we believe Mr. Wheelwright has not made of it.

Builders, and still more, owners of buildings are very apt to think that "a brick is a brick." Especially where it is a question of purchasing common brick, the quality of the brick is not sufficiently considered. As a matter of fact, it is in purchasing common brick that especial care needs to be exercised, as there is every grade from the large, soft, poorly formed and underburned brick, which is common in some parts of the South and West, to the hard, compact, well-made waterstruck brick, which in durability is probably for all practical purposes equal to the ordinary run of pressed brick. The want of care which intending builders exercise in the selection of their brick retards the improvement of common brick manufacture. By a false and short-sighted economy builders stand in the way of their own best interests as well as those of the community. So careless are buyers sometimes that undersized brick of poor quality can be frequently sold for the same price per thousand as a larger brick, although it will take more of them to do the same amount of work.

The improvement of the quality of common brick is a matter that is of especial concern to our smaller Western cities and towns, particularly those of more recent growth. Improvement in the quality of the brick is likely to go hand in hand with improvement of brick architecture. Better design will demand better brick, and better brick will demand better design; and better architecture means advance all along the line for any town. In most growing Western towns what is desired is a quick return and a large return on the money invested; but in the long run a better quality of work will pay better. Indeed, a little more exercise of care and forethought will produce vastly better results at very slightly increased expenditure. Those builders who in the future of these towns will go ahead of their fellows will be those who have the wisdom to look to the future, who have the foresight and the knowledge to take advantage of any suggestion or any means of improvement which may present itself, who have not only energy and push but public spirit and intelligence, and the desire to do good work. We believe that conscientious work pays in the long run, not only in self-respect, but in dollars and cents.

In many towns of the West and the new South — we are perhaps not wrong in saying in most such towns — the brick are of such poor quality that it is thought necessary to paint the fronts of brick buildings. If they are to keep a respectable appearance they have to be repainted every few years. A little more care with the brick, and this expense of painting would be avoided and a much more attractive building produced. In Tennessee, for instance, the ordinary brick if soft-burned are red; but if hard-burned they are an unsightly gray. These brick are poor in quality as well as in appearance because not compact. By the use of a repressing machine these brick, which are over large, can be reduced in size, made very compact, and when burned produce, at an expense of about $6 per thousand, an excellent and very pretty mottled brick, somewhat similar in appearance to those which in Eastern markets sell for about $45 per thousand. These brick could be sold at a good profit at $8 per thousand if once a demand for them were created; and we believe it would only require one pretty building of this brick in any growing district to create the demand. A hand repressing machine can be had for about $100.

We only give this as one instance of what may be done by a little intelligent enterprise. One reason which leads to the painting of buildings is the streaky appearance produced by the great variation in color of the brick; but the different culls could be mixed so as to produce an even and pleasing variety of color or, with a little pains and trouble, the different colors could be arranged in bands and patterns to produce charming decorative effects. We hope in a later issue to have an article on the various patterns and diapers that can be produced by the use of different bonds.

A point that needs more attention than it often receives is the proper protection of the top of brick walls. The durability of a brick building is largely effected by the protection or want of protection of the top of the wall. A board with a tin coping is the least protection any brick wall ought to have even in comparatively unimportant positions. But a terra-cotta, especially a salt-glazed terra-cotta, coping is better; or the roof itself may be made to project well out from the walls, supported by projecting rafters or brackets. This not only affords the protection the wall needs, but the broad shadows produced are most effective, as may be seen in many of the old Italian buildings.

There can be no doubt that both in this country and in Europe architects are gradually awakening to the possibilities, in our day so little attempted, of color decoration on the exterior of buildings, or rather, they are beginning to dare to make the attempt which hitherto, probably from timidity, they have avoided. This new development, or rather this revival, finds its echo in the technical journals. We print in this issue an excellent article by Mr. C. H. Blackall on the use of colored terra-cottas, while the *Architectural Review* for Feb. 1 has an admirable editorial on the possible return of color to the exterior of buildings. One thing that has hitherto deterred from the use of much color in the exterior of buildings, has been the fact that the severity of our climate prevented much use of applied color, and until the recent development among us of the production of glazes and of colored terra-cottas and bricks, there was, in this country, almost no available means of permanent color decoration on the exterior. This recent development of color possibilities brings with it danger as well as promise, and it would be well carefully to consider the laws, so subtle and so inexorable, of color design. It may be said at once that except in the hands of an artist, of a man with the color sense inborn, failure is the certain result. Yet some consideration of the right use of color is useful. The remarks in the editorial in the *Architectural Review* to which we have referred are so excellent that we venture to quote from them at length. "In using the opportunities afforded us by the colored enamels of faience, of tiles, etc., it is worth while considering how far we shall adopt them, and in what manner. That they are of excellent colors is conceded, and the temptation to mass these colors is natural enough, but it seems to us that in massing them we should adopt some one color as the field, and display upon that, at points or in places determined by the constructive expression, enrichments of other colors which would form focus points of mosaic. In mosaic much is due to the texture given by the frank avowal of the joints. In the use of enamelled brick or tile this is frequently neglected. The public has an especial fear of a light mortar joint, because it is associated in their minds with cheap, badly laid walls. They also dislike a broad joint for the same reason. Yet an avowed joint in any compound structure, such as brick or tile, must be of great value in constructive expression, in preventing too sleek, smooth an appearance of wall, in fact, in giving

texture and softening of color. In the coloring of the Alhambra reliefs all the reveals are left white. In the glazed tile wall surfaces of the African mosque towers the joints are large and left white, and the designs thus enhanced. This is suggestive, therefore, in the method of using enamelled faiences."

In that excellent journal, the *Semaine des Constructeurs* of the 16th of January last, there is also an article on the use of faience in the external decoration of buildings which is very suggestive. In Paris this method of decoration seems to have been quite frequently applied to store fronts, especially in trade signs, in which elaborate decorative and pictorial designs executed in faience on the face of the building indicate the trade pursued within; so in one case two symbolical female figures representing the art of glass-working and the art of the worker in clay, and in another in a corner panel in a house a blue vase on a white ground, surrounded by a border of Persian or Byzantine design. We do not feel inclined to recommend to our storekeepers this elaborate and expensive use of color in trade signs. The store front is, for the most part, in best taste and most attractive when kept perfectly simple, and our street signs are wont to be too blatantly conspicuous as it is. But this use of faience does suggest a new field for color decoration in the architecture of buildings where elaborate decoration is appropriate.

In our last issue we noticed a suggestion made at the meeting of the National Brick Manufacturers' Association, that it would be well to make a pressed brick of double the ordinary width to be used as a bonding brick, and the hope was expressed that this brick would be manufactured and put on the market. We gladly call attention to the letter from the Hydraulic-Press Brick Companies of St. Louis, Chicago, Washington, etc., stating that they manufacture just such a brick. We hope that this will come into general use as a bonding brick where the even appearance of a wall all stretchers is desired. As a rule, however, we repeat that a visible bond is to be preferred as a matter of artistic effect.

St. Louis, March 10, 1892.

The Brickbuilder, 4 Liberty Square, Boston, Mass.

Dear Sirs, — We have received the first copy of your paper, and note the extract from the remarks of a member of the National Brick Manufacturers' Association at Washington. The same remarks were published in the *Clay Worker*, and we replied by sending them a copy of our catalogue, and calling their attention to a brick made for the purpose suggested by this member. This is a brick which we have made for a number of years, and it is quite popular.

Yours truly,

H. W. Eliot,
Hydraulic-Press Brick Co.

For those readers who did not see the January number we wish to again call attention to the brick church which Mr. J. A. Van Straaten, Jr., of this city, is designing for us. Mr. Van Straaten studied under a celebrated architect in Holland, the country of all countries for brick buildings, and his work was largely on churches. Here he acquired a thorough knowledge of all forms of brick construction, and we believe we have made no mistake in commissioning him to design for The Brickbuilder a church that will be ideal, in that it is the solution of an ideal problem, with no restrictions that will prevent the design from becoming a model for the study of church building in brick. A most complete set of drawings will be published.

In our next number, for March, we shall begin the publication of a carefully selected series of photographic supplements of the best examples of European brickwork, with comments and description which we are sure will be of value to all classes of our readers.

The *Inland Architect* of February publishes among other things an excellent design by Mr. Francis M. Whitehouse, of Chicago, — the residence of Mrs. Barbara Armour of that city. The house is of light-colored stone and red brick, and is noticeable for the decorative frame, formed apparently of alternately projecting and receding headers, which surrounds and unites the windows of the second and third stories with excellent effect.

It is a somewhat unusual and very successful use of a simple and well-known brick treatment. The beauty of the brick wall, as well as the strength of construction, would have been increased by the use of a visible bond in the brickwork. The wearisome monotony of a wall face consisting of nothing but stretchers is made the more noticeable by the otherwise charming design.

The *Inland Architect* for March has a very suggestive and interesting design for the Girls' Mutual Benefit Club at Chicago by Jenney, Mundie & Waid, architects. The building is apparently on a twenty feet wide city lot, is such as to be suited to a private house, and is three stories high. It is curious in that the entrance is below grade. The design is one that shows the success that may be attained by a simple and appropriate use of common brick even without any moulded work. The cornice especially is interesting and effective.

We desire to call special attention to the announcement of competitions as promised in our last number, which will be found in another column. We earnestly hope that a large number of draughtsmen will be found willing to enter the lists. The problems presented are practical ones and should prove interesting to designers, and the judges whose services we have been fortunate enough to secure will insure an impartial and just decision on the real merits of the designs submitted.

GREEK TERRA-COTTAS.

The majority of Greek terra-cottas are small figures in the round, varying in height from four inches to twelve inches. Occasionally they exceed these dimensions. These figures exhibit a variety of male and female types, some of which may be at once recognized as mythical personages, while to the majority no name can be assigned; many are probably mere studies from real life. They were generally cast in moulds, and afterwards retouched by the hand. Occasionally specimens occur which appear to have been modelled. Originally these figures were all painted in tempera, and some few still preserve their original colors. Many of these terra-cottas were doubtless votive offerings, and must be considered as separate figures; others formed part of larger compositions. In some cases these figures were attached to the surface of vases, when they were called emblamata. Compositions in relief are rarely met with. Such terra-cottas are found in every part of the Hellenic world, but especially in the tombs of Magna Græcia, which have yielded an immense variety of small figures. They have also been obtained by excavations in ancient cities and especially within the precincts of temples. These figures are not to be regarded as elaborate works of art. They are modelled with great freedom and sometimes a little carelessly; but in the attitudes and the composition of drapery, they show a felicity and boldness of invention which are well worthy of the attention of the modern artist. Many of them seem like sketches in clay, taken from life, or studies and recollection of the works of great sculptors. When we consider that they were in most cases the cheap and common product of the mere modeller (horoplatos), we see how generally a knowledge of art must have been diffused among the Hellenic people. The British Museum contains a very fine collection of figures of this class, chiefly from Rhodes, Athens, the Cyrenaica, and Magna Græcia. — *The Architect.*

ON THE USE OF COLORED TERRA-COTTA.

To many people who are engaged in building operations the name of terra-cotta usually suggests nothing but a substance of a dull red hue, generally very rudely modelled into a semblance of architectural carving, with edges and arrises more or less sharp and with surfaces and joints which are intended to match but usually do not. Thus far in the history of American architecture there have been but very few attempts to shake the idea from the public mind that terra-cotta is anything but a modified form of brick, susceptible of no greater variety of treatment than can be accomplished by changes in the form. The element of color has been in one sense sedulously avoided. To be sure, the natural red to which most of our clay burns is by no means unpleasing in tone, and can be used very effectively in mass; in witness whereof, there are many buildings scattered through the land which present a very pleasing appearance, all of the moulded work and details being carried out in terra-cotta either exactly or very nearly the color of the brick used for the surrounding wall. But in a broader sense a monochrome can hardly be called color; and while every one is in one way perfectly conscious of the boundless possibilities involved in the use of different colors of terra-cotta, either from timidity or from unwillingness to be the first, there has hardly yet been a single instance where an architect has boldly departed from the tone which we are pleased to call terra-cotta red, or has undertaken anything like a general color treatment; while even with one tone we have not been anywhere nearly as successful as some of the old artists who built such structures as the Monastery of the Certosa near Pavia, where, indeed, all the terra-cotta is red, but a red so rich and transparent, and combined so effectively with the whitewashed walls and tiled floors, that one feels an appreciation of the color sense in looking at it, a sentiment which is usually quite lacking in our American attempts.

Changes, indeed, have been made in the colors of the terra-cottas which have been offered in the market. We have Perth Amboy and Anderson bricks, and terra-cottas of several varieties of tones obtained by using different materials or different mixtures in the clay, but the opportunities for a real color treatment in a building offered by any of these are quite small, and the results are in one sense uncertain. It might, however, be questioned whether the introduction of different colored materials in the manufacture of terra-cotta has been altogether desirable, as it has led to the evolution of some of the most abominable shades and tones, and to the use of mottled terra-cottas, which, while they may be fashionable, and may even please some people by reason of novelty, can hardly appeal to an artistic or cultivated color sense. We all admire the half tones and delicious shadings found on some of the old brickwork in Europe, which has been crumbling and decaying for centuries; but any attempt to imitate the old tones with new, clean, sharp-struck brick or stiffly moulded terra-cotta, while it may from a distance offer a suggestion of the antiquity which we so much admire, is anything but satisfactory upon nearer investigation; and, after all, why should we attempt to imitate what time alone can accomplish when there is so wide a field opened in another direction, — and that is by the use of glazes and enamels, — treating the terra-cotta simply as a body upon which to build up our colors, exactly as a painter uses his pigments.

The revival of interest in terra-cotta work, which was manifest some fifteen years ago, undoubtedly had its origin very largely in the ideas of such men as Ruskin, who tried so bravely to beautify the common things of life, and to show that artistic feeling was in no sense inseparable from humble materials. The strong emphasis which Ruskin undertook to lay upon what he designated as truth in construction and design, extended itself to brickwork and terra-cotta, and we were taught to admire the beauty there is in a plain, honest brick wall, so called. The attempts which have been made up to within a few years to extend the scope and possibilities of terra-cotta in its various forms, have been limited almost entirely to following out the Ruskin theory of being true to a material, and letting the material show fully and freely for itself. But there is nothing æsthetically wrong or really contrary to this theory in covering our terra-cotta with a deep gloss or a heavy enamel which shall entirely conceal and obliterate the original tone of the material; rather, there is every reason for utilizing so excellent an opportunity for producing a permanent color effect. Only a very few of our terra-cotta manufacturers have made any serious attempt to produce and market glazed and enamelled terra-cottas, but the marked success which has followed the efforts of such firms as Atwood & Grueby, of Boston, has abundantly demonstrated, not only the artistic practicability of such treatment of the material, but also its commercial desirability.

One has not very far to go to seek for historical authority and direct information in the immediate lines of glazed and enamelled terra-cotta. Scattered all through Italy are wonderful bits of enamelled work from the hands of the Della Robbias and their immediate successors. In all this work, the clay is treated simply as a body, and the colors are applied much in the same manner as pigments; and while in the case of the Della Robbias the limitations of color were very manifest both in variety of pigments and in mechanical execution, it can still very easily be seen that the same processes can be amplified until the artist who undertakes to introduce color in a building can play with his tones just as truly and with just as much latitude as the artist who paints a picture. Nor is the source of inspiration limited by any means to Italy. The wealth of color in the Alhambra, and, indeed throughout nearly every Spanish city, can be drawn upon very freely. The Pallisy ware, the Limoges enamels, the Dresden porcelains, the Delft potteries, and numerous other sources, are sufficient to give one more ideas both for color and design, than can be worked up in a lifetime. We are too prone to neglect the opportunities offered by Europe. Though American architects go there every year by the hundred, and study, in their way, most exhaustively, we find it very difficult to bring away with us a fair appreciation of the feeling which permeates the old work; and when it comes to applying color in terra-cotta, we have had as yet so little true appreciation of what it means, that the successes have been few and far between.

It may be said that these references are made entirely to tiles rather than to terra-cottas, and that is quite right; for, after all, tiles are only another form of terra-cotta. In a general sense all the ceramic arts relate to burnt clay, and in the broadest meaning of the word that is what constitutes terra-cotta; so that one may with perfect propriety transplant an idea of color from wall tiles, and apply it almost without modification in connection with glazed or enamelled terra-cotta, with the very important difference that tile work is practically limited to flat surfaces and painted details, being used in the color sense more as mass than as detail, whereas terra-cotta has practically no limitations and can be moulded, modelled, cast, or preserved in plain huge masses.

The Portuguese have shown a great deal of cleverness in some lines of exterior ceramic decoration. The houses in Lisbon, particularly, are nearly all faced on the outside with enamelled tiles made of a very porous and low-grade terra-cotta. Sometimes the effect is very striking. A single tone is never employed, blue patterns on a white ground or combined with lemon yellow or various shades of green being most commonly used, though blue is the predominant color. Sometimes an unbroken dark sulphur color is used over an entire front with very marked success. It would hardly do to say that such a method might be transplanted directly to the United States with any degree of assurance, but there is no doubt of our color sense being quite undeveloped, or, perhaps more truly, we are afraid of it and haven't yet dared to stretch out our hands and use the opportunities which enamelled terra-cottas offer. It might fairly be asked whether, after all, we need it; whether the plain red bricks, or possibly the mottled bricks, or the uniformity of tones of our building stones do not offer sufficient opportunities of color to meet the requirements of our climate and of our methods of business. Perhaps the best way to answer such a query would be to look at what has been done in the past. Before undertaking a new departure it is always wise to see what every one else has accomplished in the same line, and to endeavor as far as possible to profit by what has been found advisable under similar circumstances elsewhere. Throughout the whole of the Grecian and Roman architectures, the two styles which, perhaps, we are least apt to think of as attempting a coherent color treatment, we find unquestionable evidence that the buildings were never left in plain monochrome; that even with such structures as the Parthenon, which, in a poetic sense, has been thought to stand out like a bit of pure white marble against the blue sky, the beauties of the architecture, the true significance of the details, were in reality always reinforced by a very liberal use of color. Certainly the Gothic and Renaissance periods, to say nothing of such styles as the Persian, Indian, or Moorish, were full of color in every sense; and it is only within the last century that our external architecture has been dulled down into a uniformity of tone and the element of color entirely disregarded. There is a big gap between the rich, exuberant coloring of the Rococo period, when marbles, frescoes, gildings, and every con-

RESIDENCE OF CHARLES J. PAGE, ESQ., WESTLAND AVENUE, BOSTON.

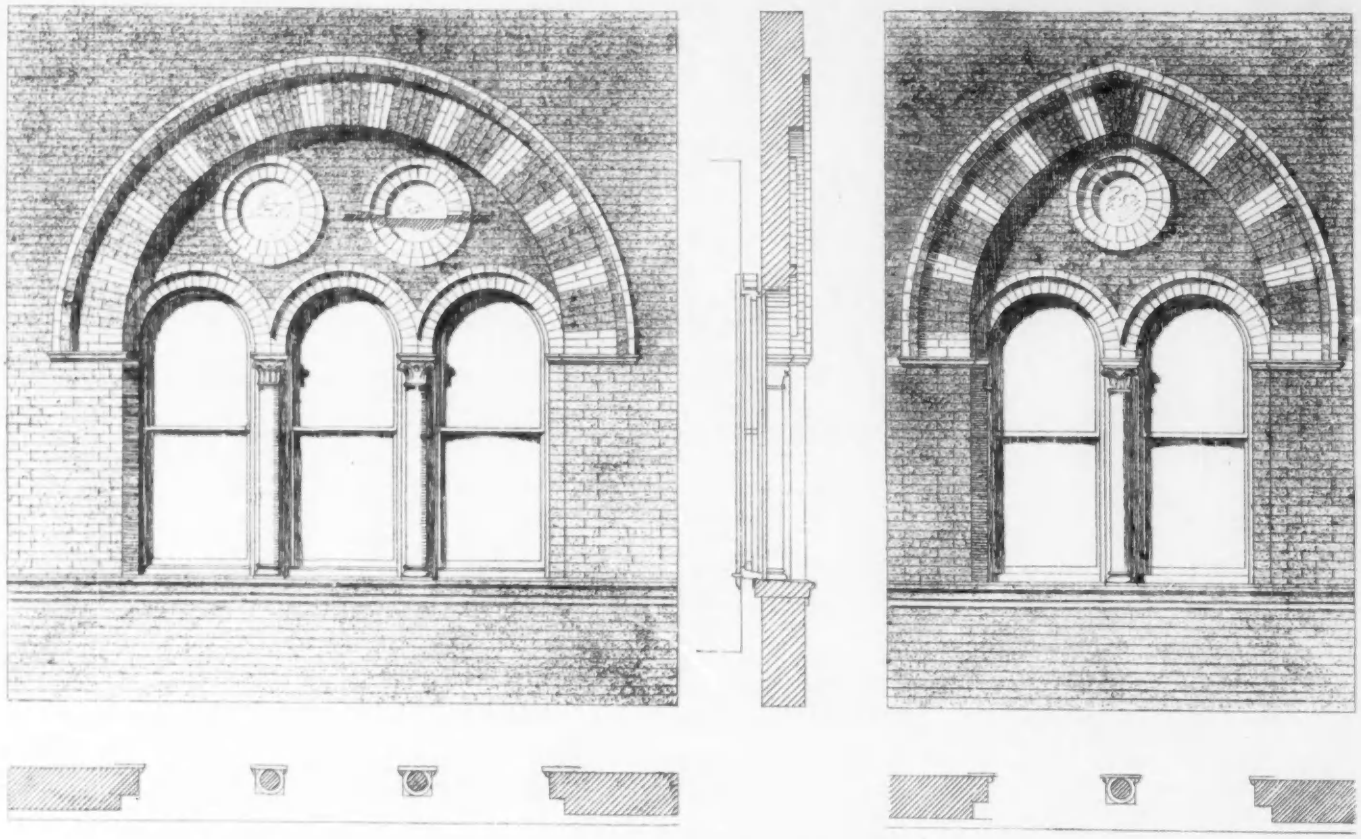
H. Langford Warren, Architect.

· CITY · OF · BOSTON ·

"PRIMARY SCHOOL AT GLEN ROAD"

EDMUND M. WHEELWRIGHT

CITY ARCHITECT



FROM HOTEL LUDLOW
BOSTON
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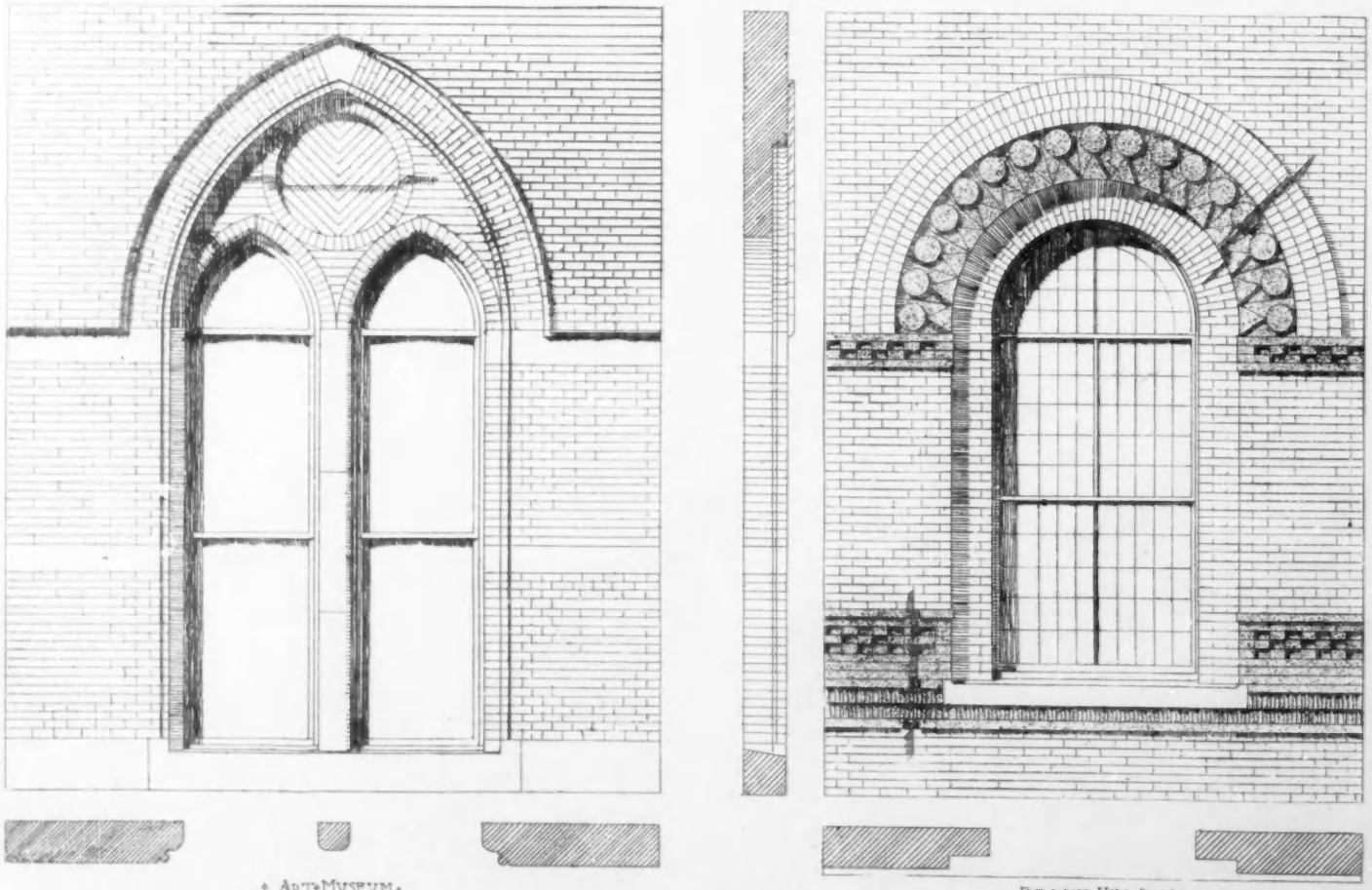
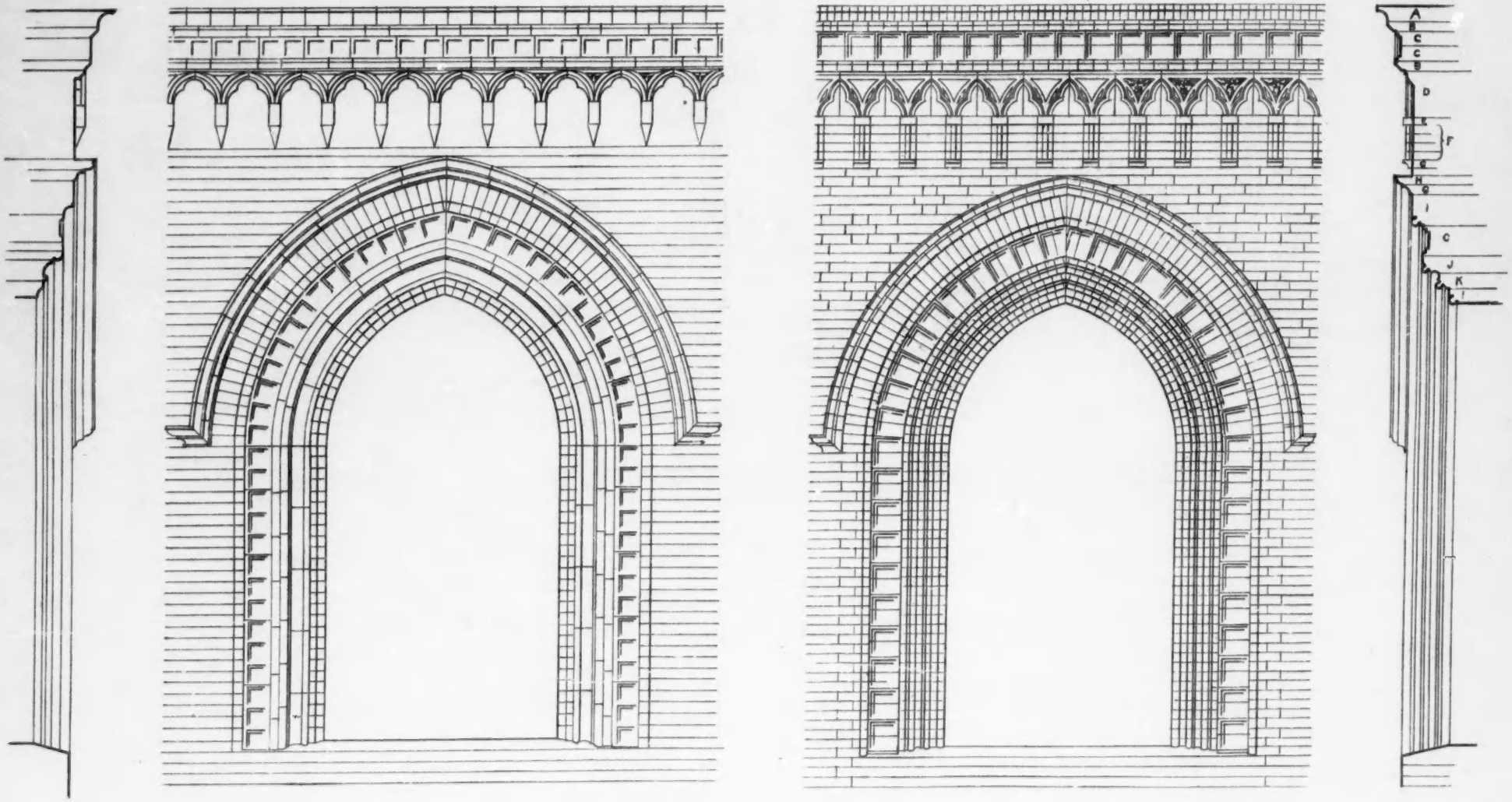


ART MUSEUM
BOSTON

BEACON HILL PLACE
BOSTON

SOME BOSTON WINDOWS.

THE BRICK BUILDER.



Window from the Broletto at Brescia.

Window designed from Stock Patterns.

The design on the right is made up from the patterns shown in the Peerless, Anderson, Hydraulic-Press, Glens Falls, and Ittner Catalogues; the letters in the section referring to the catalogue numbers, as follows:

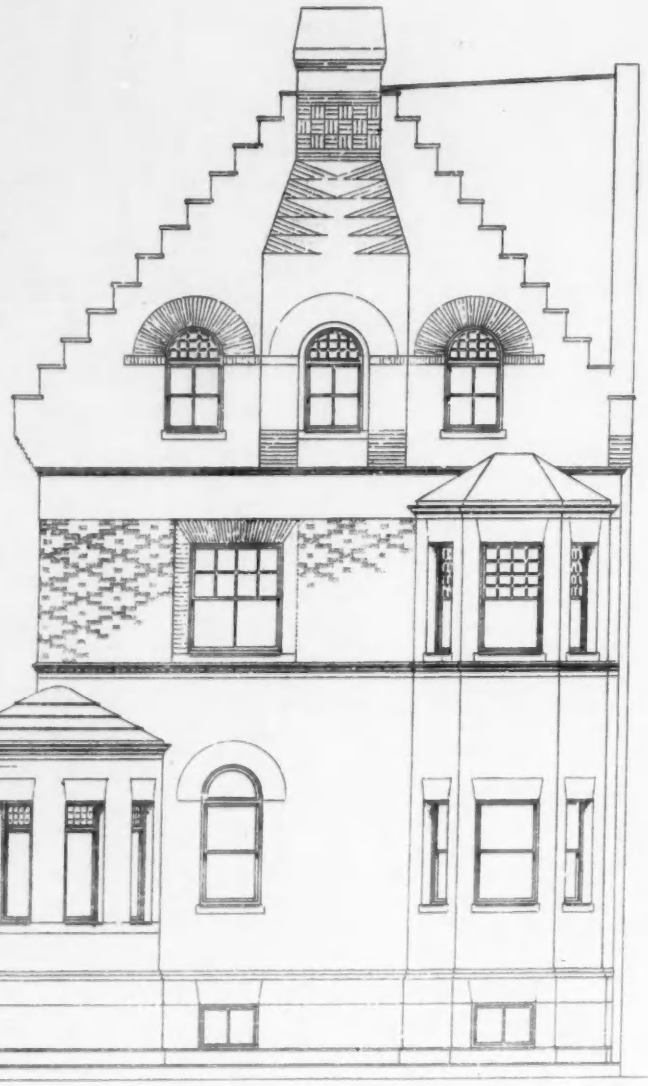
A. Anderson, 663; Peerless, 1; Ittner, 37; Glens Falls, 8.
B. Peerless, 58; Glens Falls, 34.
C. Anderson, 441.
D. Peerless, 160.
E. Plain Pressed Brick.
F. Peerless, 29.
G. Peerless, 23; Hydraulic-Press, 10; Glens Falls, 36.
H. Anderson, 550.
I. Peerless, 60; Hydraulic-Press, 17; Glens Falls, 53.
J. Peerless, 15*a*.
K. Peerless, 15*b*.

FRONT ELEVATION

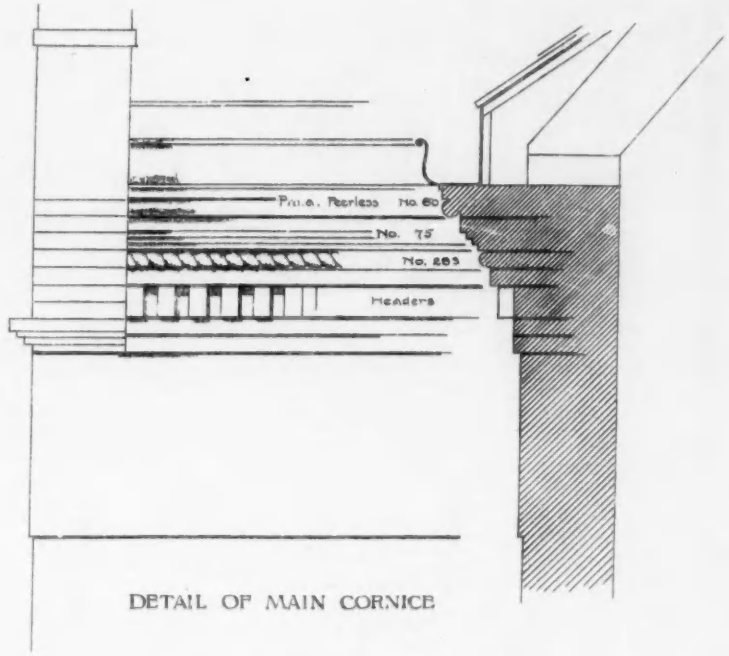
RESIDENCE OF C. J. PAGE, ESQ., WESTLAND AVENUE, BOSTON.

H. LANGFORD WARREN, ARCHITECT.

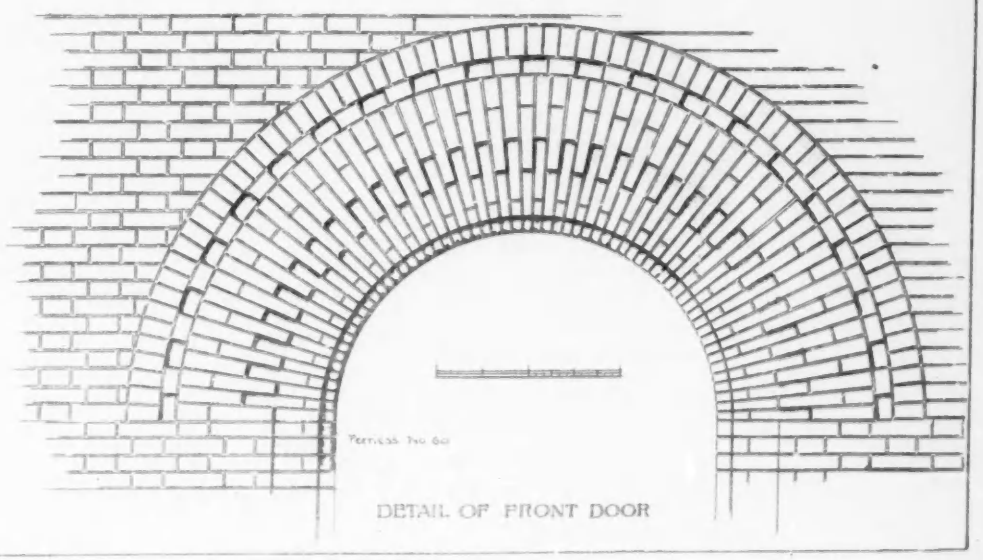
THE BRICK BUILDER.



END ELEVATION

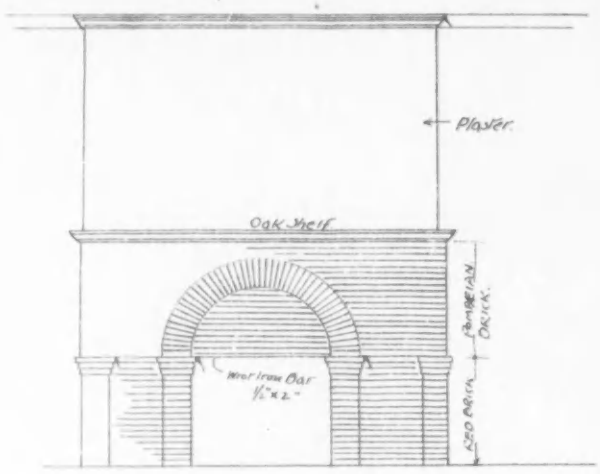


DETAIL OF MAIN CORNICE

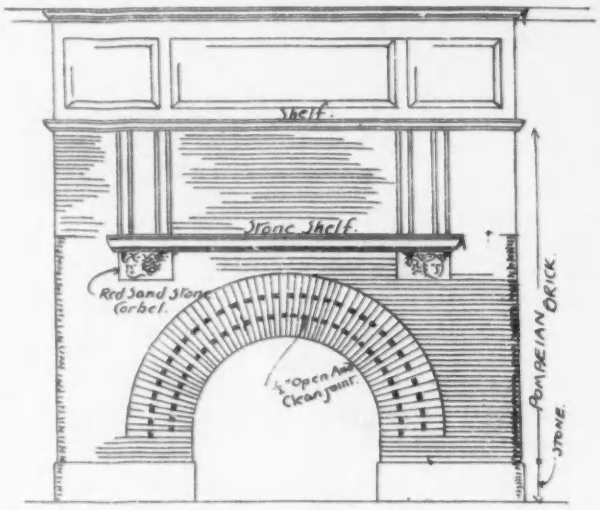


DETAIL OF FRONT DOOR

RESIDENCE OF C. L. PAGE, ESQ., WESTLAND AVENUE, BOSTON.



IN OFFICES-THIRD FLOOR



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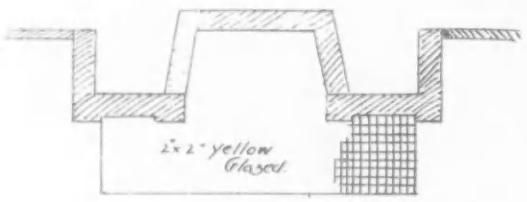
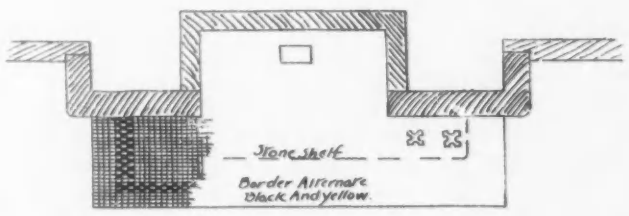
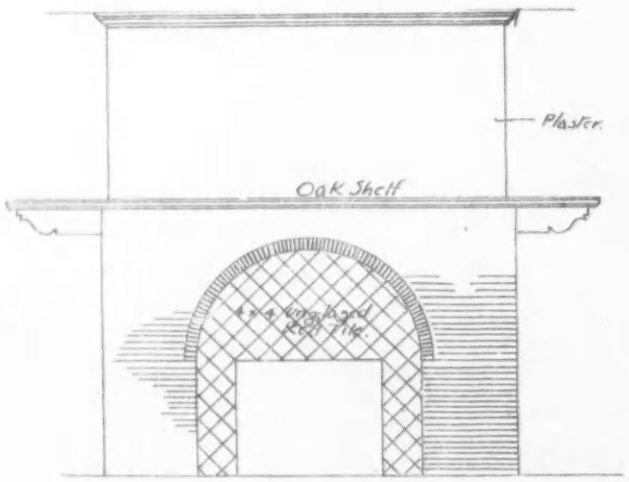


PLAN.

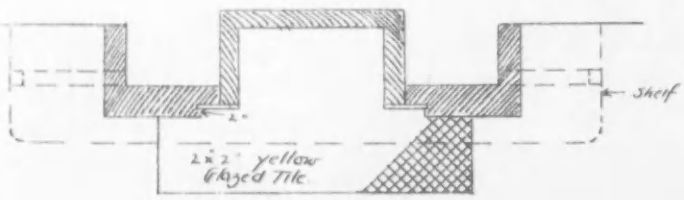


PLAN

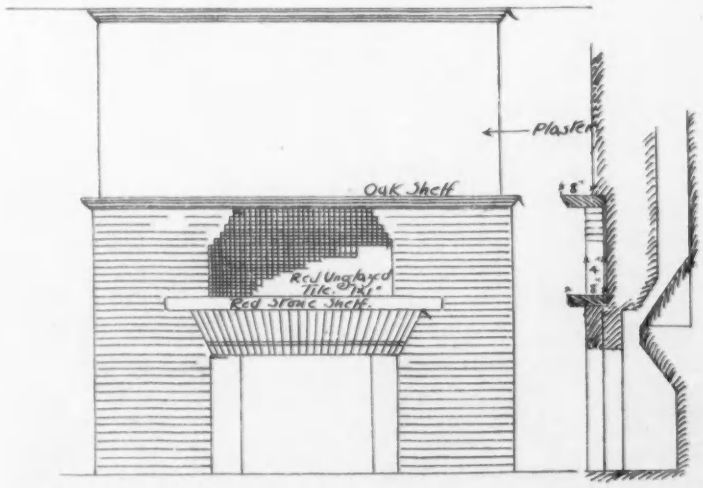
·BRICK MANTELS IN YMCA BUILDING·
·CLEVELAND·O·
·C·F·SCHWEINFURTH ARCHITECT·



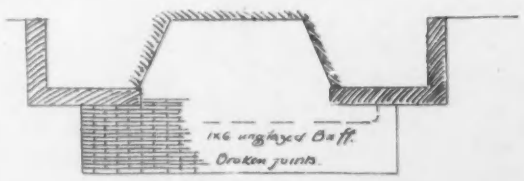
SMALL OFFICE 3rd FLOOR·



PLAN.



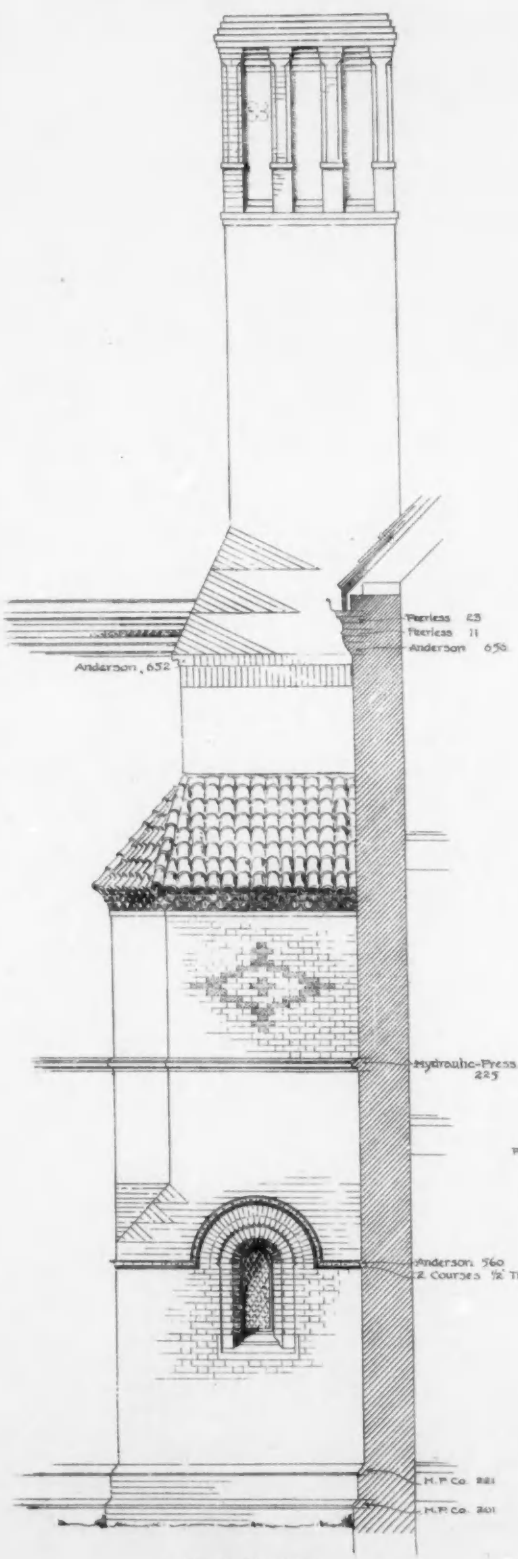
INLARGE OFFICE 3rd FLOOR



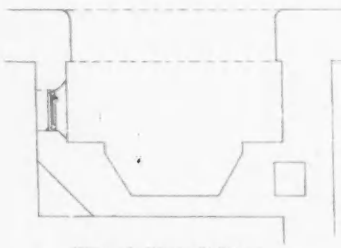
PLAN.

BRICK MANTELS.

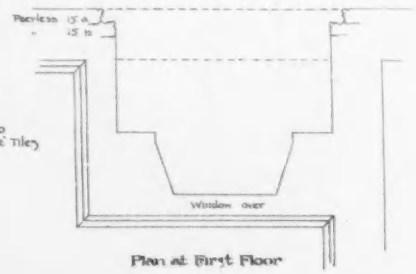
C. F. SCHWEINFURTH, ARCHITECT, CLEVELAND, OHIO.



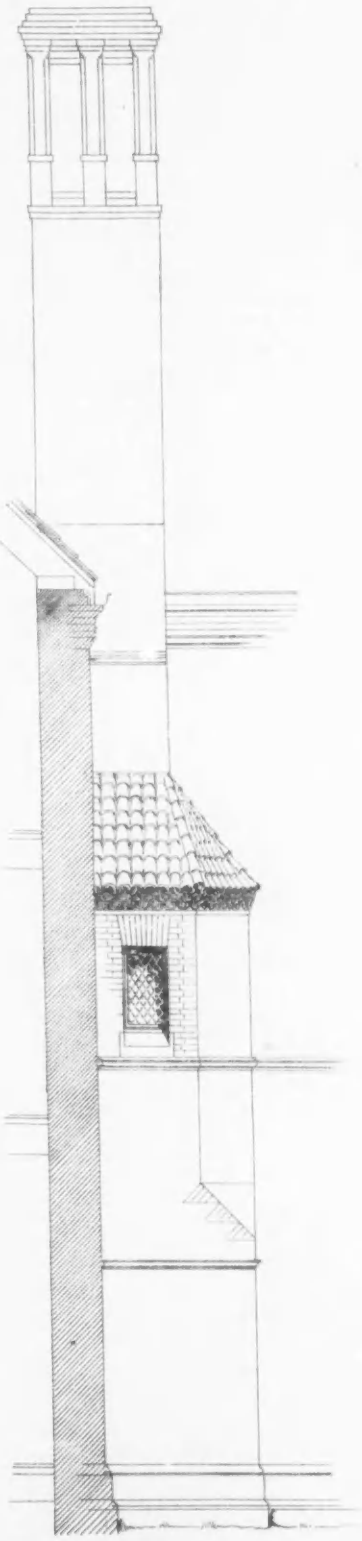
Front Elevation



Plan at Second Floor

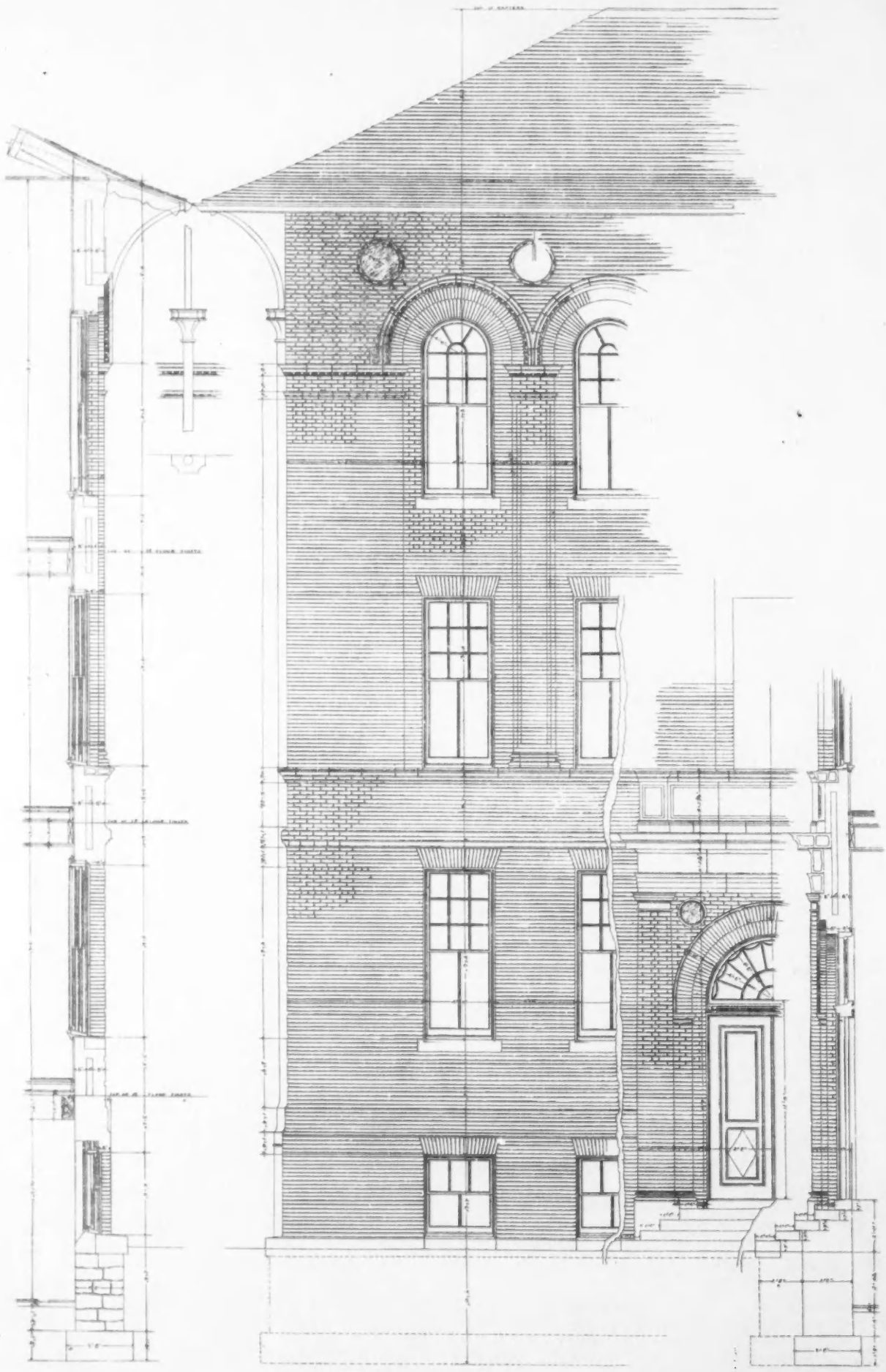


Plan at First Floor



End Elevation

DESIGN FOR AN OUTSIDE CHIMNEY.



AGASSIZ GRAMMAR SCHOOL.

E. M. WHEELWRIGHT, CITY ARCHITECT, BOSTON.

ceivable form of colored material were used with a most lavish hand, to our present period when only a few struggling manufacturers are trying to stimulate a demand for more latitude in external color work, while our architects seem content to use but a single material in carrying out ideas of civic buildings. If we are to use color in our street architecture, stone will never satisfy. Marble in our climate will not stand. There remains only enamelled terra-cottas, which, however, offer so wide a field and are so boundless in their possibilities that if we do not in the next quarter century evolve a more coherent and successful treatment of color for the exterior of our buildings, it will not be for lack of opportunity or materials, but entirely from lack of our own appreciation.

But it cannot be reasonably doubted that we are on the eve of a very marked revolution in this respect. Any one who has followed the growth of the buildings which are being prepared for the World's Fair at Chicago, cannot but be struck with what might be called the spontaneous color outbreak which has been manifested in all of the documents published so far; and this seems to have come simply as a result of starting with the use of plain white plaster for all the details of the building. So simple a foundation cannot but suggest clear, brilliant tones, and brilliant coloring has been the prominent tendency of all the schemes of the exposition which have been made public. Of course, enamelled terra-cotta is only one vehicle for the expression of color in architecture, and it is doubtful if the authors of any of these color studies had any specific materials in view; but not even the richest and most variegated marbles could answer for the purpose quite as completely. There is no doubt that the exhibition will prove quite as marked an encourager of art in this country as was the Centennial Exhibition at Philadelphia, and to judge by present manifestations, we are on the eve of a regeneration in the use of color for exterior architecture, a regeneration in which enamelled terra-cotta is sure, perforce, to play a leading part.

The mottled and dull clouded terra-cottas which have been so much used of recent years have had a retarding influence upon the development of applied color to terra-cotta, in that they have started in the wrong way. The architect who undertakes to introduce color in exterior design must first of all think in color, think in a variety of tones, and not limit himself to mere monochrome or single colored material. And then he must start as an artist does with a picture, with white as a basis, building down to the strong tones and only using the mottled effects and the deep coloring to accentuate the lighter and transparent tones; in other words, work just as Della Robbia and Pallisy did in the old days. All of their colors were opaque enamels laid over plain terra-cotta. We can do exactly the same to-day, and work down from light to shade rather than from shadow to light.

But, after all, comes the commercial question, is it wanted and will it pay? No one would undertake to advise covering all of our buildings with enamelled terra-cotta. Nor would one undertake to say that terra-cotta in any shape would be the proper thing for all places and all times; but there come to every architect in his practice opportunities which demand pronounced color treatment, — a theatre front, the vestibule of a hotel, a high frieze around some tall office building, Turkish bath rooms, a safe deposit office, and other similar cases wherein color should show as an essential part of the scheme, but where it must be in the form of something more lasting and less destructible than either paint, wood, or plaster. To a certain, but quite limited, extent this can be accomplished by the use of marble, but on the other hand almost everything that is possible with marble can be carried out a great deal better by enamelled terra-cotta. Whether it pays the manufacturer to undertake such work is a pretty serious question. Probably it does not pay at the beginning, but ultimately, when we as a people are made more awake to the possibilities, when we expect that a building of a public nature, or a light and cheerful destination must be treated in bright and lively colors harmonious in tone but strong and lasting in effect, there is no doubt that enamelled terra-cotta will then very largely usurp the place which is now occupied only by the dull monochromes which we are content to call terra-cotta. It must be done thoroughly, however. We must admit that enamelled terra-cotta is no longer an experiment; that any desired tone can be obtained, and that the artist who undertakes to use it is not obliged to limit himself to the colors found on sample cards, but can let his fancy run at riot as he pleases, with a surety that the result can be carried out to a shade with the various enamels. We must admit that the field is boundless, that terra-cotta is not to be regarded simply as burnt clay, but as a vehicle for permanent color effects. If the manufacturers who have thus far done so well with enamels can follow out the lines they have started, and can give the designer all the latitude of which the material is capable, there is no doubt of the result.

C. H. Blackall.

TWO LETTERS.

New York, March 26, 1892.

To the Editors of the Brickbuilder:

Gentlemen, — I received some days since a copy of the January number of The Brickbuilder, which has been read with much interest.

The paper is a credit to its publishers, occupies a new field, and should become useful to architects and brick manufacturers.

Mr. Warren's article, entitled "A few Neglected Considerations with regard to Brick Architecture," was read with special interest. It is full of important suggestions of great value, with most of which I fully agree. His ideas regarding the variation in shades on large wall spaces, so as to pattern after nature and avoid a mechanical uniformity, are those of Mr. J. C. Anderson, who has rendered the architects of this generation such invaluable service by his years of labor and research in the art of clay working.

He has long been trying to impress it upon our architects and builders, and no one will rejoice more than he to find so powerful a pen as Mr. Warren's enlisted in the same cause. What a triumph it will be for the culture of our time, and what a monument to the genius of its architects, when they fully comprehend the possibilities now largely hidden in the humble brick.

Then in place of dull, characterless walls we shall have the rich tints of the autumn foliage, combined as nature intended, in color harmony. The fire will bring these out in clay as the sun does on the forest leaves, and the artist will arrange them so as to produce the desired effect.

In Mr. Warren's suggestion that superior effects can be obtained by using common brick for the large wall spaces, using pressed brick only for ornamentation and trimming, you will pardon the assumption of a layman, when I venture to say "he is clear off." That must come from his environment. It is a Boston fad, as also his erroneous suggestion that the common brick possess greater strength. While Boston produces an excellent common brick, much superior in strength to the average, yet Gen. Q. A. Gilmore (a high authority) gives the strength of strong red common brick as 1,100 lbs. per square inch, while the tests made by Capt. Lyon at the U. S. Watertown Arsenal, of the Anderson pressed brick, gives the *average* of this manufacture 11,944 lbs. per square inch, and in some of the tests made they ran up to 16,991 lbs. per square inch, showing strength greater than granite. So much for the relative strength of common compared with pressed brick. The shades and tints of pressed in variety and character are superior to common, owing to the greater heat employed in burning. The reason this has not been discovered is because of the separation of each shade into uniform lots in sorting, which Mr. Warren so justly complains of, and the use of a single shade on the walls; but the variety is there all the while awaiting the advent of an artist to use them, but until he appears, dull uniformity will be the rule.

A common brick wall ornamented with pressed brick is very much like a flounce of silk on a body of calico, or a broadcloth swallow-tail coat over coarse, dirty pants tucked into cow-hide boots. They may be striking, but hardly artistic.

The advocacy of such a combination it seems to me is subversive of what we all should most desire, the elevation of our standards.

Again, are our architects and art critics willing to admit that the highest excellence can only be attained by taking the work of past generations for our models? That this age is tied to the apron strings of craftsmen whose bones long since have turned to dust? That because our fathers put a stone in one end of the sack to balance the corn in the other, as the horse bore it to the mill on his back, the same method should meet the wants of their sons?

Are we inviting the world to our shores next year to witness the progress of art during the past four centuries, to show them nothing better than cheap imitations of their old buildings and cast-off ideas?

We certainly have a right to expect better things and the advocacy of more independence and originality from The Brickbuilder. It should point the road on which our young American architects and craftsmen may achieve a success that will carry their names with honor to coming generations as master builders. It

should show that appreciation and encouragement of the efforts of those manufacturers who, like Mr. Anderson, are by their genius and labor, producing material fit for the builder's use; for it must be remembered that it is only by the co-operation of the architect with the producer of the material that enters into a structure that the greatest measure of success can be obtained.

Wishing THE BRICKBUILDER success in the full measure it may deserve it, I remain, Yours truly,

J. C. CUSHMAN,
Secretary New York Anderson Pressed Brick Co.

To the Editors of the Brickbuilder:

GENTLEMEN, — The letter of your correspondent, Mr. J. C. Cushman, of the New York Anderson Pressed Brick Co., in the course of which he makes some strictures on the views expressed in my article in your last issue, is a curious example of that mode of thought in this country to which our worst architectural failures are mainly due, and I am only glad of an opportunity to combat directly views which seem to me so misleading, but which one rarely has the good fortune to find so frankly and concisely stated. There are three principal mistakes or confusions of thought which run through your correspondent's letter. In the first place he confuses mechanical excellence with artistic beauty; in the second he seems to regard originality (or more clearly stated, mere novelty) as the most desirable artistic quality, and in the third place he fondly imagines that advance in art is possible without reference to the works of past generations. Now these opinions are precisely those which have made difficult the path of the true artist, the sincere lover of the beautiful in this country, and which have, perhaps more than anything else, tended to retard our artistic growth.

The truth is, we live in a mechanical age and country. Our greatest achievements are in the domain of mechanical, not of artistic, excellence, and as our mechanical and scientific advance has been so stupendous, so wonderful, it is perhaps not unnatural that, in the popular mind at least, the point of view of the mechanic arts in which we so greatly excel should be transferred to the fine arts in which our achievement is so meagre and in which our interest is so slight.

But let me endeavor to answer your correspondent's criticisms one by one. I wish the statement that the artistic use of common brick is "a Boston fad" were borne out by the facts; but alas! the wilderness of uninteresting and monotonous pressed-brick fronts in most of our new streets makes this flattering opinion hardly tenable. The few exceptions to be found here and there by such men as the late H. H. Richardson, McKim, Mead & White, and Sturgis & Cabot are by men who took their suggestion, not from Boston environment, but from a careful and sympathetic study of the old brickwork of Italy, France, England, or the Netherlands. Mr. Cushman will not find anywhere in my article any suggestion that common brick is stronger than pressed brick. I am well aware of the greater crushing strength of the latter, but I should like to ask what constructional purpose is served by giving a wall a thin facing of a material having a crushing strength of about 12,000 pounds to the inch, when the centre and back of the wall, which bear most of the weight (in the usual method of facing buildings, practically all the weight), has a crushing strength of only 1,100 pounds per square inch, or often less. Moreover, the crushing strength of brickwork is a different matter from the crushing strength of individual bricks.

Your correspondent thinks the variety and character of the shades of pressed brick are superior to common. The colors of pressed brick are, it is true, more intense and each brick more even in color than common brick, and it is precisely on this account that I prefer the common brick for broad wall surfaces in most instances, especially, as I said in my article, in the country, where pressed brick always looks so much out of place, precisely on account of its superior mechanical and inferior artistic quality. The common brick is quieter, softer in color, and its rough texture as against the smoothness of pressed brick gives greater beauty to the wall surface in which it is employed. The objection to the use of pressed brick as a trimming for common brick is certainly not well founded, and one has but to remember the beautiful effects obtained by the use of stucco with brick, stone, or marble trimmings, or brick with marble or stone trimmings, to see the irrelevance of Mr. Cushman's comparisons. In the moulded and ornamented parts of a building a material capable of high finish and delicate detail is usually required; in the wall spaces a material that shall be pleasant in color and texture. That Mr. Cushman regards such combinations as tending to lower our standards would indicate that the standards he has in mind are purely mechanical ones. But the object of my article was mainly to insist on the unused possibilities of design in the common brick. I distinctly admitted in my article that in our *cities* the pressed brick front may be in place, but that when it is used, the brick should be unculled (except as regards quality), and in this I am glad to find that Mr. Cushman agrees with me. In our cities the demand for mechanical excellence usually requires the use of pressed brick; but it should be distinctly recognized that it is a mechanical, not an artistic standard that requires this. Our people do not like the appearance of anything that is not mechanically perfect. I do not say that this is not perfectly right (when other considerations do not outweigh), but I do say that it has nothing to do with artistic excellence or æsthetic beauty.

Mr. Cushman's question, "Are our architects and art critics willing to admit that the highest excellence can only be obtained by taking the work of past generations for our models?" must receive a decided affirmative answer. Not only is this now the case, but it always was and always must be the case. Whenever art has been forced by circumstances to take a new start it has had to wait till it had a generation or two of tradition at its back, before it attained to the highest excellence, and even in that new start it has leaned on such knowledge of past art as circumstances brought to its hands. Such a question as that of your correspondent could hardly be asked by one who was familiar with the history of architecture in the past or who really understood the significance of what is being accomplished by our best architects to-day; and he would find on examination that those of our architects whose works rank highest with competent judges, and who are most conspicuous for the truest originality, are precisely the men who have the most intimate knowledge of the great achievements of past art, and whose work is consciously founded on the close and loving study of the work of "craftsmen whose bones," as Mr. Cushman says, "long since have turned to dust."

When we are able to equal in artistic excellence the work of these craftsmen, we shall be less likely to regard their achievements as "cast-off ideas," and such measure of architectural success as the buildings for the Chicago World's Fair attain, to which your correspondent refers, will be accomplished — is being accomplished by a frank and avowed following of the most approved of old-world models, adapted and moulded by new-world requirements and methods, and modified by new-world ideas. These are the methods and the only methods by which artistic advance is possible to us. I must insist again upon the statement with which I closed my article. "In developing our own brick architecture we cannot do better than turn to the noble brick buildings of the past, in the endeavor to learn the principles that underlay its developments, and in the hope and belief that these principles will receive more beautiful exposition in the future."

That the work of such men as Mr. Anderson is aiding in the advance to which I look forward, I am very glad to acknowledge, and the beauty of finish and range of color which his brick give us are a distinct advance, for which architects may well be grateful. I am strongly of the belief that the same scientific knowledge and the same patient research will yet accomplish more than has yet been accomplished with the common brick in beauty and variety of color. It seemed worth while to answer your correspondent's letter at some length because the views he expresses are founded on misconceptions which are so common and so unfortunate, as it seems to me, in their results. Mechanical excellence is a desirable thing, but a designer may be pardoned for regarding artistic beauty as a superior consideration where constructional requirements are not in question.

Yours truly, H. LANGFORD WARREN.

THE BRICKBUILDER COMPETITIONS.

In accordance with the statement made in the January number THE BRICKBUILDER announces the first of a series of competitions. Messrs. E. M. Wheelwright, R. C. Sturgis, and H. L. Warren have consented to act as judges, and on their award THE BRICKBUILDER will give the prizes offered in each competition. The award will be announced in the issue of THE BRICKBUILDER next following the receipt of the drawings, and the prizes will be immediately distributed.

All drawings must be sent prepaid, addressed to the office of the Brickbuilder Publishing Co., 4 Liberty Square, Boston, Mass. They must be marked with a motto or cipher and accompanied by a sealed envelope with similar cipher, which shall contain the author's name and address. These envelopes will not be opened until after the award is made. The publishers of THE BRICKBUILDER reserve the right to publish any or all of the drawings for which prizes have been given. Prizes will be given only to the authors of such drawings as the judges consider of merit.

COMPETITION NO. 1.

AN ARCHED ENTRANCE.

Programme. A fraternal order or society in a large town proposes erecting on a lot of fifty feet frontage on the principal street, a two-story brick building, the ground floor of which will be given up to two stores, and an entrance way and stairs leading to the rooms of the society located on the floor above. The entrance will be in the centre of the façade, and will have an opening no less than six feet wide. The first story will be fourteen feet high from the sidewalk to the top of the girders, carrying the wall over the store show-windows. The line of the second floor will be indicated by an ornamental course directly above the girders. The ground floor will be six inches above the sidewalk. Each store must have a clear space between brick piers, for entrance and show-windows, of at least fifteen feet. The problem is to distribute the brick wall surface into piers and abutments to the arched entrance, and to design this entrance, using bricks of the ordinary size and moulded bricks from any of the catalogues of well-known makers, the catalogue number and maker being indicated in each case.

Required. A general lay-out of the first story at a scale of one fourth of an inch to the foot, the door being carefully indicated; also a detail drawing of the door at a scale of one inch to the foot, showing elevation and section, with such other details as are necessary to explain the design. A perspective sketch, on a separate sheet, may accompany the drawing, but it is not required. All drawings to be made in black ink on Bristol-board, hot-pressed Whatman or Leonine drawing paper.

Date. All drawings must be received at the office of THE BRICKBUILDER not later than May 12, 1892.

Prizes. Upon the award of the judges the publishers of THE BRICKBUILDER will distribute the following prizes: First prize, $10; second prize, $7; third prize, $5; five fourth prizes consisting of subscriptions to THE BRICKBUILDER for 1892.

IMPORTANT. As it is proposed to publish successful designs in THE BRICKBUILDER, no drawings will be considered that are not arranged on the sheet with a view to their reducing and grouping well on a BRICKBUILDER plate, the proportion of which is as three is to four.

COMPETITION NO. 2.

A TWO-STORY STORE FRONT.

Programme. The building is to be built between two party walls, on a lot having a frontage of twenty-five feet. The first story will contain a store and the entrance to the floor above which may be used for business offices or as the merchant's residence. The first story will be fourteen feet high in the clear, the other story ten feet. The building will be simple in design and will be built of brick. Moulded brick will be only sparingly used in cornice and strings, and perhaps about the windows and doorway, the catalogue number and maker being in each case indicated.

Required. An elevation of the building at a scale of one fourth of an inch to the foot, with details on the same sheet at a scale of one half inch to the foot, showing sections and elevations of cornices, strings, or other features. Drawings must be in black ink on Bristol-board, hot-pressed Whatman or Leonine drawing paper.

Date. All drawings must be received at the office of THE BRICKBUILDER not later than June 1, 1892.

Prizes. First prize, $25; second prize, $15; third prize, $8. Three fourth prizes consisting of one book, the designer's selection, from the following list: Treatise on Masonry Construction; The Five Orders of Architecture, according to Vignola, editions of Bates, Kimball & Guild or W. T. Comstock; Boston Architectural Club Sketch Book; either of the three volumes of the Technology Architectural Review; A. Parlett Lloyd's Building; Petit's Architectural Studies in France; either volume of Berg's Safe Building; Ware's Perspective; Kidder's Pocket Book, 1892 edition; both volumes Roger Smith's Handbooks of Architectural History. Five fifth prizes consisting of a subscription to THE BRICKBUILDER for 1892.

IMPORTANT. As it is proposed to publish successful designs in THE BRICKBUILDER, no drawings will be considered that are not arranged on the sheet with a view to their reducing and grouping well on a BRICKBUILDER plate, the proportion of which is as three is to four.

THE ILLUSTRATIONS.

Plate 9. Primary School at Glen Road, Boston, Mass. Edmund M. Wheelwright, City Architect.

The design is quiet and dignified, but is not as successful as most of Mr. Wheelwright's recent school buildings. Though executed in brick it is not a characteristically brick design, but rather suggests stone.

Plate 10. Some Boston Windows.

The two windows from Hotel Ludlow (Mr. C. Howard Walker, Architect) are of red and yellow brick; the circular disks are of marble. They are an example of the charming effect to be obtained by the use of plain unmoulded brick.

The window from the new wing of the Boston Museum of Fine Arts (Messrs. Sturgis & Cabot, Architects) is a good example of a simple gothic window.

The window from the building on Beacon Hill Place is of brick painted yellow, and is rich in effect, though the means employed are simple. It is of yellow brick with red brick trimmings. Messrs. Allen & Kenway were the architects.

Plate 11. A Comparison of Windows.

This plate shows a fine example of an Italian gothic window, from the Broletto at Brescia, precisely as it exists, redrawn for THE BRICKBUILDER from Prof. Strack's work on Italian brick architecture, and to the right of the plate is the same window as closely as it can be reproduced by using modern brick. All the bricks in this window are made by one or other of our well-known manufacturers of pressed and moulded brick. The schedule on the plate shows the makers and catalogue numbers of the bricks used. A study of the old and new is instructive and reveals, among other things, the strange absence from the brickmakers' catalogues of well designed brackets, and the want of some very simple but useful mouldings.

Plates 12 and 13. Residence of Mr. C. J. Page, Westland Avenue, Boston. Mr. H. Langford Warren, Architect.

This house is built of common brick with pressed brick trimmings and mouldings. The columns in the windows are of marble. The diaper pattern is obtained by using two kinds of common brick from different kilns, having a somewhat different color, the diaper being much yellower than the ground.

Plate 14. Brick Mantels. Mr. C. F. Schweinfurth, Architect, Cleveland, O.

These simple mantels are suggestive examples of what may be done by a straightforward use of brick and tile.

Plate 15. Design for an Outside Chimney.

This chimney is supposed to stand in a re-entrant angle of a house. The moulded brick used from the trade catalogues are indicated by notes in the drawing.

Plate 16. Detail of the Agassiz Grammar School, Boston, Mass. Mr. E. M. Wheelwright, City Architect.

This most interesting design is characteristic of the excellent work being done by the present city architect of Boston. It is admirably proportioned and refined in detail, and the treatment throughout is characteristic of the material employed. Of especial interest is the decorative use made of different bonds. In the ground story a bond of headers every six courses is used, and to emphasize still further the horizontol bonds thus formed, the courses of headers are recessed half an inch from the wall face. This story is laid in red mortar. The next division of the design is laid in Flemish bond, in yellow mortar, while the frieze above the third story windows is laid in white mortar, in a very decorative French bond consisting of a course of three headers, a stretcher, a header, a stretcher, three headers, and so on, as may be seen by the drawing. Marble disks are used as decoration in the frieze, and on each side of the doorway.

Supplement. Photograph of the Residence of Mr. C. J. Page, Westland Ave., Boston.

This supplement is to show the actual house, the scale drawings of which are given in plates 12 and 13.

Our supplement for next month will be a photographic reproduction of the famous Baptistery of S. Stefano at Bologna, which is the first of the series announced elsewhere. An interesting description will accompany the plate.

FOUNDATION WELLS IN INDIA.

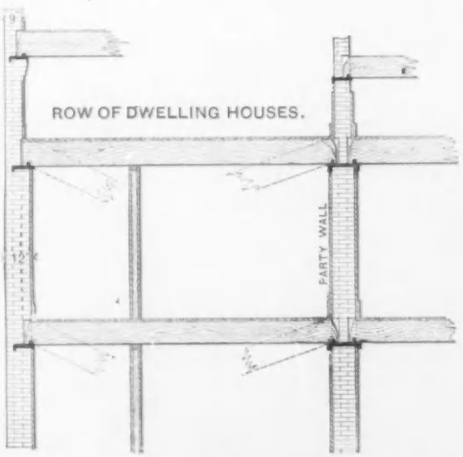
Piling for the foundation of buildings appears to be entirely unknown in Hindostan. The ordinary mode for securing a foundation, where the superstratum is tenacious and rests upon loose sand, is to dig a well until water is reached; a curb of timber is then placed, and upon it a cylinder of brick, 7½ exterior and 3½ feet interior diameter, is built to the height of 3 or 4 feet above ground. As soon as the masonry has hardened sufficiently, the well-sinker fixes a plumb-line to the top of the cylinder as a guide and descends withinside, carrying an instrument called a "Phaora, or Mamooti," somewhat similar in shape to a hoe; with this he excavates the earth until the water is too deep; he then commences the use of the "Jham," which resembles the "Phaora" in shape, but is about 36 inches long and 27 inches wide, and is suspended to a cord passing over a pulley above the cylinder. Upon this instrument the well-sinker descends, and, diving into the water, excavates with the "Jham" the soft earth under the sides of the curb, and is at intervals drawn up with the instrument. The cylinder descends gradually from 6 inches to 2½ feet per day, as the earth is withdrawn from beneath it, and relays of workmen keep it constantly going, lest the sand should settle around it and cause it to hang up. The natives are very expert in this operation, and not unfrequently remain under water more than a minute at a time. The cylinders have been sunk as deep as 40 feet, but with extreme labor. A series of these wells being sunk at intervals of one foot between them, they are filled with a grouting of lime and rubble-stone, and separately arched over; arches are then thrown transversely from the centre of each parallel pair, and another set of arches turned over the adjacent wells longitudinally; the whole is then covered with masonry, and the pier or other building raised upon it. Such foundations are found to answer perfectly in situations where almost any other kind would be washed away.— *The Architect.*

PRACTICAL NOTES.

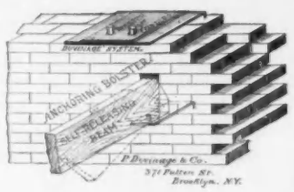
PUBLISHERS' ANNOUNCEMENT.—Under this heading we shall mention improvements in connection with brick-building, but in no case will any paid for matter be allowed in these columns, for the purpose of this department is not advertising. No matter appearing here is in any way, shape, or manner published as part of any advertising contract, verbal or written. The selection is made for the practical use of our subscribers. While in many cases articles are written upon data supplied by manufacturers, we are confident that these data are trustworthy.

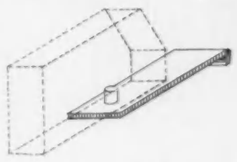
WALL ANCHORS.

In our last number we called attention to the Goetz system of anchorage and caps, illustrating the various modes of application. It will, we think, be of interest to our readers to continue the subject by a brief discussion of the Duvinage system, known as the Standard Anchor and Post Cap. The anchor is of principal importance. It is designed, as is the Goetz anchor, to do away with the danger of falling joists wrecking the walls, and at the same time to form a tie, which is effected in this case by a projecting lug for which there must be an auger hole. The plates are made in several sizes, of both cast and wrought iron; and in the case of a party wall or partition, a double-ended plate, extending through the wall, is used.



The plates are also made for iron and steel beams, and are an additional advantage in that they give a larger bearing surface. Certainly it has an advantage over the Goetz anchor in requiring less labor to prepare the joists, which need only half a dozen turns with an auger, as against two saw cuts and chiselling out. The cuts herewith given, supplied us by the inventor, will give clear enough ideas in general of the anchor. Further information as to price will be supplied by the manufacturers, P. Duvinage & Co., 371 Fulton Street, Brooklyn. The plates are sold also by dealers in builders' hardware. The Goetz-Mitchell anchor is manufactured in all parts of the country, by local foundries, upon a royalty. The address of the nearest foundry would probably be supplied by the general office, at New Albany, Ind. The matter of effective anchorage is of considerable importance, and we should like to have ideas from our readers.





A NEW FOLDING BLIND.

The mention of this blind and the doors that work on the same principle, would hardly be in place here, were it not for the fact that many architects have found them desirable for use in brick buildings where the removal near the window opening of one course of bricks, gives room for a large blind. One way is here shown, but there are others that suggest themselves. Recently, the manufacturers brought to our notice a case where there was but sixteen inches of pier between windows, yet the blinds were put in by a little variation of the principle of closure on which they were constructed. They have also been found to adapt themselves perfectly to projecting bow windows which, in brick buildings, are so often constructed of copper, or galvanized iron. While carefully made and hung, they are so boxed as to be easily put in place by any carpenter. The catalogue shows various uses to which the Flexifold doors and blinds may be put, but it is a matter of regret that with so great an opportunity for artistic design and finish, as these offer, that the manufacturers should not have been more happy in the designs their catalogue contains. A recent sketch by Clarence Luce, of New York, published in some of their advertisements, shows that thoroughly artistic treatment is possible, when an artist studies the problem. The company has a branch office in the Boston Master Builders' Exchange, and information can be obtained there.